October 2003

Castille Pass Channel Sediment Delivery (AT-04)

Project Status

Approved Date: 2000
Project Area: 5,051 acres
Approved Funds: $1.9 M
Total Est. Cost: $31.1 M
Net Benefit After 20 Years: 589 acres
Status: Engineering and Design
Project Type: Water Diversion

Location

Castille Pass is located off of East Pass in the Atchafalaya Delta in St. Mary Parish, Louisiana.

Problems

Growth of the lower Atchafalaya Delta has been reduced as a result of maintenance of the Atchafalaya River navigation channel. Delta development in the shallow waters of Atchafalaya Bay is dependent on distributary flows and the diversion of sediments into overbank areas through crevasse (an opening within a levee)channels.

The open crevasse channels are frequently short-lived because sediment accumulation within the channels decreases flow efficiency. Also, maintenance dredging, the placement of material dredged from the navigation channel has an effect on riverflow efficiency. As riverflow through a crevasse channel is reduced, the amount of sediment that can be deposited in the delta is likewise reduced, resulting in decreased marsh development.

This restoration technique is an example of what is proposed in the Castille Pass.

Restoration Strategy

The Castille Pass project will re-establish the sedimentation processes that lead to subdelta development in this area of the Atchafalaya Delta.This project consists of dredging and extending Castille Pass to promote subdelta development. Castille Pass would be dredged, extending it towards Fourleague Bay and ending near South Point. This channel will provide water and sediment through distributary channels to the area among several U.S. Army Corps of Engineers' beneficial use disposal islands located on the east side of the Atchafalaya River. Excavated sediment would be placed to create delta lobes between the confluence of the main and distributary channels. Approximately 150 acres of marsh would be created from the initial construction of the Castille Pass and distributary channels.

Scheduled maintenance activities are expected to create another 73 acres of marsh.

Progress to Date

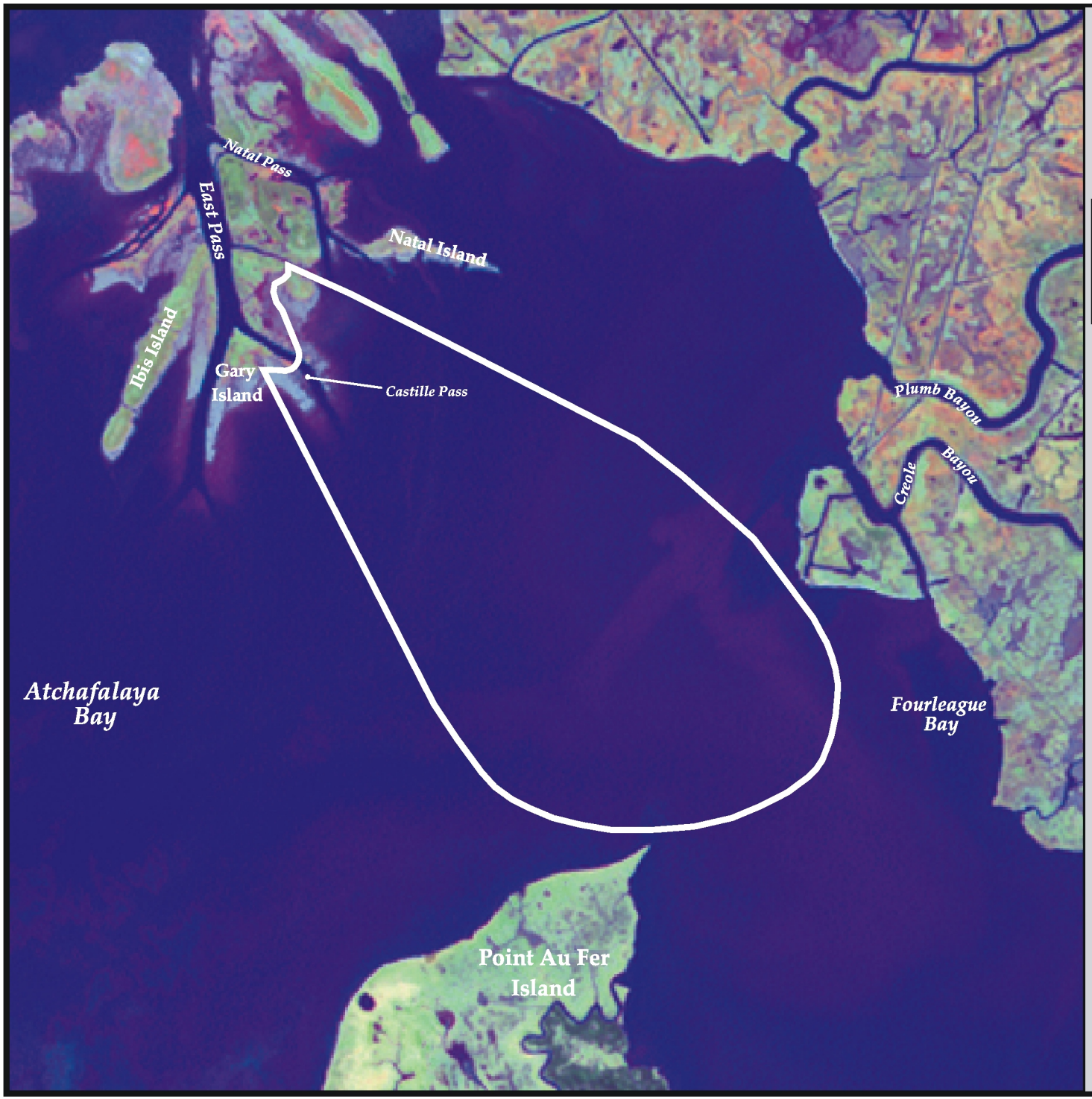
The cooperative agreement was awarded September 29, 2000. Hydrodynamic modeling and engineering and design are underway.

This project is listed on Priority Project List 9.

For more project information, please contact:

Federal Sponsor:
National Marine Fisheries Service
Baton Rouge, LA
(225) 389-0508

Local Sponsor:
Louisiana Department of Natural Resources
Baton Rouge, LA
(225) 342-7308



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Project Boundary

USGS science for a changing world

Louisiana

Project Location

N

0.5 0 0.5 1 Miles

0.4 0 0.4 0.8 Kilometers

Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station

Background Imagery:
2002 Thematic Mapper Imagery

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